

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

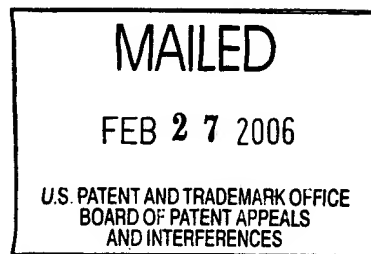
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SRINATH HOSUR

Appeal No. 2006-0638
Application No. 09//813,532

ON BRIEF



Before HAIRSTON, LEVY and BLANKENSHIP, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

Decision on Appeal

This is an appeal from the final rejection of claims 1 through 12. The disclosed invention relates to a method of transmission over two or more antennas using orthogonal frequency division multiplexing (OFDM). In the method of transmission, subcarrier symbols of a burst from one of the antennas are a transformed version of the subcarrier symbols of the corresponding burst from the other one of the antennas.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A method of transmission, comprising:
 - (a) providing a set of N symbols where N is an integer greater than 1;
 - (b) providing $M-1$ transformations of said set of N symbols where M is an integer greater than 1;
 - (c) transmitting said set of N symbols on N subcarriers in a burst from a first antenna; and
 - (d) transmitting each of said $M-1$ transformations of set of N symbols on N subcarriers in a burst from a corresponding one $M-1$ antennas.

The references relied on by the examiner are:

Dabak et al. (Dabak) 6,424,679 July 23, 2002
(effective filing date Oct. 7, 1998)
Lee et al. (Lee), "Antenna Diversity for an OFDM System in a
Fading Channel," IEEE Military Communications Conference
Proceedings, 1999, pages 1104 through 1109.

Claims 1 and 7¹ stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee in view of Dabak.

Reference is made to the brief and the answer for the respective positions of the appellant and the examiner.

¹ Although the statement of the rejection (answer, pages 3 and 4) does not mention claims 2 through 6 and 8 through 12, we assume that these claims are still rejected under 35 U.S.C. § 103(a) based upon the combined teachings of Lee, Dabak and a reference to Vasic (U.S. Patent No. 6,178,194) (final rejection, page 3).

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejections of claims 1 through 12.

The examiner acknowledges (answer, page 3) that the reference to Lee describes the use of OFDM without any transformations of a set of N symbols. According to the examiner (answer, pages 3 and 4), Dabak discloses transformations in a Space Time Transit Diversity (STTD) in a spread spectrum communication system. Based upon the teachings of the references, the examiner concludes (answer, page 4) that "it would have obvious to one of ordinary skill in the art at the time of the invention that Dabak teaches implementing transforming the input symbols before transmitting the transformed symbols and the non-transformed symbols on respective antennas in a spread spectrum communication system, and this can be implemented in the OFDM communication system as described in Lee so as to increase the diversity and BER performance of the communication system."

Appellant argues inter alia (brief, page 3) that "there is no suggestion to combine the OFDM (orthogonal frequency division multiplexing) of Lee with the STTD (space-time transmission diversity) of Dabak."

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We agree with appellant's argument. Nothing in the record supports the examiner's unsupported reasons for combining the disparate teachings of the references to Lee and Dabak. The mere speculation of the examiner cannot serve as the basis of a finding of obviousness. Only the objective teachings of the prior art or knowledge generally available to one of ordinary skill in the art can be used by the examiner in an obviousness determination. See In re Lee, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). Thus, the obviousness rejections of independent claims 1 and 7, and the claims that depend therefrom, are reversed.


DECISION

The decision of the examiner rejecting claims 1 through 12 under 35 U.S.C. § 103(a) is reversed.

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REVERSED


KENNETH W. HAIRSTON
Administrative Patent Judge


STUART S. LEVY
Administrative Patent Judge

Howard B. Blankenship
HOWARD B. BLANKENSHIP
Administrative Patent Judge

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